C) AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Replace paragraphs 0013, 0016 and 0019 with the following replacement paragraphs. The markings show all the changes relative to the previous version of the corresponding paragraph.

[0013] One embodiment of the heating, ventilation, air conditioning or refrigeration (HVAC&R) system 10 of the present invention is depicted in Fig. 1. A positive displacement lead compressor 12 is connected to a motor 21 and inverter 42, for selectively controlling operational parameters, such as rotational speed, of the compressor 12. Compressor 12 discharges compressed refrigerant gas through discharge ~~line 24~~line 22. Similarly, compressor 14, which operates in parallel with compressor 12, discharges compressed refrigerant gas through discharge ~~line 22~~line 24. These compressors are typically positive displacement compressors, such as screw, reciprocating or scroll, having a wide range of cooling capacity. Sensors 48, 50 monitor refrigerant gas parameters, such as pressure pulses, passing through respective discharge lines 22, 24 providing parameter inputs to a controller 56 via respective lines 58, 60. The controller 56 includes logic devices, such as a microprocessor or other electronic means, for the generation of speed control ~~signals 46~~ signals 47 and 48 for controlling the operating parameters of compressors 12, 14 by controlling their respective inverters 42, 44 and motors 21, 23. AC electrical power received from an electrical power source 40 is rectified from AC to DC, and then inverted from DC back to variable frequency AC by inverters 42, 44 for driving respective compressor motors 21, 23. The compressor motors are typically AC induction, but might also be Brushless Permanent Magnet or Switched Reluctance motors. After refrigerant gas that is compressed by compressors 12, 14 is directed downstream of sensors 48, 50, discharge lines 22, 24 join and become a common line 26, although lines 22, 24 may remain separate if desired. Optionally, muffler 15 is positioned along the common line 26 to dissipate or absorb the pressure pulses generated by operation of the compressors 12, 14.

[0016] Inverters 42, 43 collectively provide variable speed control to the operating parameters of respective compressors 12, 14 by independently controlling both the frequency and voltage magnitude of electrical power to the motors 21, 23 by power source 40. Collectively, inverters 42, 43 can simultaneously vary both the frequency and voltage, as dictated by the controller 56 via respective speed control signals 46, 47 to provide control of the overall system refrigeration capacity through the use of variable speed modulation of compressors 12, 14. Inverters 42, 44 are also referred to in the industry as variable speed or variable frequency drives. Alternately, ~~variable speed drives 42, 43~~variable speed drives 42, 44 may contain a single AC to DC converter and two or more DC to AC inverts to provide a lower cost solution. While the system of the present invention illustrates two variable speed drives for selectively controlling two compressors, so long as each compressor is controlled by a separately designated variable speed drive, it is envisioned that any number of compressors may be employed.

[0019] One way for the controller 56 to effect noise attenuation in system 10 is to control the phase of operation of the compressor 14 with respect to compressor 12. The controller 56 monitors the occurrence of pressure pulses from the lead or reference compressor 12 by use of ~~sensor 50~~ sensor 48. From this information, the controller 56 varies the magnitude of speed control signal 47 which is applied to inverter 44 to synchronize the feedback pressure pulses emanating from the lag compressor 14 via sensor 50 with respect to frequency and simultaneously interleave the pulsations with respect to the phase of the pressure pulsations sensed by sensor 48. Referring to Fig. 2, which depicts the pressure pulses as square waves, wave 52 corresponding to lead compressor 12 pressure pulses and wave 54 corresponding to lag compressor 14 pressure pulses. Preferably, the phase of wave 54 is shifted such that the pulse of wave 54 is positioned substantially equidistant between successive pulses of wave 52. This shifting preferably produces a resultant or effective output wave that is twice the frequency of wave 52 having a wavelength half that of wave 52. Higher frequency waves are easier to attenuate, requiring smaller, less expensive dissipating or absorption mufflers.